

Claims

1. A computer system with a main system to execute an application in cooperation with a human user and a remote service system to evaluate problems in the main system, the computer system comprising:

in the main system: a database, an application server and a front-end server; and

in the service system: a service module to collect problem related data from the main system, an acquisition module to acquire knowledge representations, a knowledge module to store the knowledge representations, and an inference module for processing problem related data with knowledge representations to identify solutions, the inference module forwarding the solutions through the service module to the main system.

2. The computer system of claim 1, wherein the main system and the service system communicate through remote function call connections provided by the service module.

3. The computer system of claim 1, wherein the service module monitors the application server and the database according to instructions from the inference module.

4. The computer system of claim 1, wherein the main system and the service system are systems in client/server configuration.

5. The computer system of claim 1, wherein in the service system, the inference module is adapted to process problem related data with knowledge representations to identify solutions and to return solutions to the main system, wherein the service system returns solutions that solve the problem directly in the main system.

6. The computer system of claim 1, wherein in the service system, the inference module is adapted to process problem related data with knowledge representations to identify

solutions and to return solutions to the main system, wherein the service system returns solutions that solve the problem indirectly by being further knowledge representations for a further inference module operating for the main system.

7. A method to evaluate problems in a main computer system that has a database, an application server, and a front-end server and that executes an application in cooperation with a human user, the method comprising the following steps:

collecting problem related data from the main system by the service module of a remote service system;

acquiring knowledge representations by an acquisition module of the service system;

storing knowledge representations by a knowledge module of the service system; and

processing problem related data with the knowledge representations by a inference module to identify solutions, and forwarding the solutions through the service module to the main system.

8. The method of claim 7, wherein in step processing, the inference module performs an action selected from the group of:

identify the solutions form set of predefined advices of the application,

identify the solutions by applying knowledge representations in a sequential order,

identify the solutions by applying knowledge representations in a hierarchical order,

identify the solutions by applying knowledge representations in a dynamically adaptive order,

communicate questions to the user by composing the questions from predefined passages provided by the application, and

analyses responses that the user enters in natural language.

9. The method of claim 8, wherein the service system forwards problem data and solutions for further analysis by a human technician.

10. The method of claim 8, wherein the service system forwards problem data and solutions to the further computer in a format that allows analysis by an expert system in the further computer.

11. A computer program product comprising program code means for performing all the steps of anyone of the claims 7-10 when the computer program product is run on a computer.

12. An inference module with expertise functionality for evaluating problems in a main computer system that executes an application, wherein the inference module is adapted to process problem related data with knowledge representations to identify solutions, the inference module characterized in that the inference module is part of a service system receiving problem related data from the main computer system over a network and returning solutions to the main system, wherein in a first case, the service system returns solutions that solve the problem directly and, in a second case, the service system returns solutions that solve the problem indirectly by being further knowledge representations for a further inference module.

13. The computer system of claim 1, wherein the main system executes an enterprise resource planning application.

14. The computer system of claim 1, wherein the main system is implemented as an R/3 system.

FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP

1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
www.finnegan.com